REMARKS

Claims 1 and 3-12 are pending.

Claims 1 and 3-12 are rejected.

Independent claims 1, 10 and 12 have been amended.

I. 35 U.S.C. § 103(a) Rejection of Claims 1, 3, and 10-12

The Examiner rejected claims 1, 3, and 10-12 under 35 U.S.C. 103(a) as being unpatentable over Cuccia (U.S. Patent 6,157,673) in view of Eyer et al. (U.S. Patent 5,982,411) and Applicants' "admitted prior art". Applicant respectfully requests reconsideration of this rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings of a plurality of references. Finally, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not be based on the applicant's own disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

The Federal Circuit Court of Appeals has made it clear that patent Examiners cannot rely on their own knowledge as a basis for rejecting patent applications without the citation of specific evidence (references) having a teaching, suggestion or motivation to modify a reference or to combine two or more references. See *In re Lee*, 277 F.3d 1338, 1345 (Fed. Cir. 2002).

In a long line of cases, the Federal Circuit has specified that obviousness can be shown only when prior art of record provides a "suggestion or incentive", *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577 (Fed. Cir. 1984), "teaching, suggestion or incentive", *In re Geiger*, 815 F.2d 686, 688 Fed. Cir. 1987), "reason suggestion or motivation", *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir.

1992), or "teaching, suggestion or motivation", *In re Raynes*, 7 F.3d 1037, 1039 (Fed. Cir. 1993) to combine existing elements from different sources.

This firm rule, that an Examiner cannot reject claims as obvious unless he can point to specific references suggesting elements could be combined or modified, has been repeated many times by the Federal Circuit. *See In re Dembiczak,* 175 F.3d 994, 999; *Ruiz v. A. B. Chance Co.*, 234 F. 3d 654,665 (Fed. Cir. 2000); *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000); *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

It is respectfully submitted that the Examiner is required to find <u>each and every element</u> of the claims in citable references and, most importantly, to find such references which teach, suggest and/or motivate the person of ordinary skill to combine such elements in the manner set forth in the rejected claims. Absent the elements or the showing of a teaching, suggestion or motivation to combine such elements, an obviousness rejection cannot stand.

The Examiner bears the burden of establishing a prima facie case of obviousness and "can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988, emphasis added). To support a conclusion that a claimed combination is obvious, either: (a) the references must expressly or impliedly suggest the claimed combination to one of ordinary skill in the art, or (b) the Examiner must present a convincing line of reasoning as to why a person of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985).

A) The Disclosure of Cuccia

Cuccia is concerned with processing one transport stream from among a number of transport streams, where all of those streams use the same MPEG-2 transport protocol. Different ones of Cuccia's transport streams contain different sets

of program information (i.e. different "channels") but all use the MPEG-2 transport protocol. Although the Examiner states that "Cuccia discloses an adaptive transport decoder" (rejection, paragraph 6), Cuccia's decoder 202 is not "adaptive" since he only processes one type of protocol.

Cuccia is concerned with the problem of delay in processing signals which are encountered when a viewer wishes to change to a channel which is not contained in the same transport stream as the channel being viewed at that time. Such a change of channel requires recovering infrequently transmitted program specific information (PSI) tables from one or more different transport streams before any decoding (new channel reception) can be accomplished (Cuccia, col. 1, line 45 et seq.).

Cuccia states he solves the processing delay problem by providing a "pre-decoder 203" to access all available transport stream sources which use the same protocol handled by Cuccia's decoder 202 in order to extract and store PSI information from all of those program sources. In this way, when a channel change is called for, Cuccia can more rapidly search through just the PSI information in his "pre-decoder 203" to identify the appropriate transport stream source containing the desired new channel information (col. 1, last lines).

The Examiner states that "However, Cuccia does not disclose that the packets have different first and second transport paths" (Office Action, paragraph 7). Even more pertinent, however, is the fact that Cuccia does not disclose that the first and second streams of packets each have a different "transport protocol" as required by each of the rejected claims. It should also be noted that Cuccia does not use the terminology "transport paths" (which is used by Eyer et al. – see below) but refers only to "transport streams" (i. e. Cuccia refers to the streams of packets and not transmission paths over which they travel).

In fact, Cuccia also does not mention or suggest an "adaptive" transport decoder which can handle two or more streams of packets having different transport protocols. Cuccia's decoder only processes streams arranged according to the MPEG-2 protocol. Applicant notes that the MPEG-2 protocol does not involve two different transport protocols, but a single transport protocol.

Referring to Fig. 3 of Cuccia, each transport packet P in each of the MPEG- 2 transport streams is based on the same protocol - 188 bytes in total length - comprising a packet header PH of four bytes and a packet payload PP of 184 bytes (Fig. 3 and col. 3, lines 27 – 30). There is no disclosure anywhere in Cuccia of any stream of packets having any other transport protocol (compare the two different transport protocols of Figs. 2A and 2B of the present application with the single protocol of Fig. 3 of Cuccia).

Cuccia does not disclose or even contemplate any apparatus for handling streams of packets having different transport protocols for any purpose.

It is therefore clear (and acknowledged by the Examiner) that Cuccia does not disclose or suggest each and every limitation of the independent claims 1 and 10 – 12 of this application and specifically fails to disclose the second claim element above: i. e., "second stream of packets ------ having a second transport protocol ---- which is different than said first transport protocol". Furthermore, Cuccia does not disclose or suggest an "adaptive transport decoder" as set forth in all of the claims.

B. The Disclosure of Eyer

The Examiner has relied on Eyer in an attempt to fill the gaps left by Cuccia as set forth in the paragraph immediately above. But Eyer does not fill the gaps.

The Examiner acknowledges (Rejection, paragraph 8) that:

"Cuccia in view of Eyer does not specifically disclose that the packets of different transport paths have different transport protocols.".

The Examiner goes on to note:

"Eyer discloses digital satellite broadcasts ----- and digital terrestrial broadcasts".

However, Eyer never mentions different transport protocols associated with such broadcasts which the system could handle or how they would be handled.

Thus, Eyer neither suggests nor states that any of the "digital transport stream(s)" (col. 3, line 47) processed by his system have different transport protocols.

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Eyer describes his system as follows at col. 4, line 23:

"A method and apparatus are presented for allowing a viewer to easily
navigate television programs which are grouped according to a common
service provider or other grouping criteria by depressing the "channel up" or
"channel down" button on a hand held remote control or the like, thereby
allowing a viewer to successively select the grouped channels regardless of
the broadcast signal, transmission path and/or broadcast address in which
the channel is carried." (emphasis added).

Eyer explains his terminology "transmission path" at col. 3, line 31 as follows:

"The transmission paths may include a direct broadcast satellite path, a cable
distribution path, a terrestrial broadcast path and a multi-point microwave
distribution system path, for example."

Thus, Eyer is unconcerned about transport protocols and how one might
handle different ones. Eyer lacks any enabling disclosure for decoding two different
transport protocols as required by the present claims.

Eyer refers to a "broadcast address" (col. 3, line 15) as being different for
each channel. Eyer states:

"The primary channel programming service is carried in a corresponding
"broadcast address" which, for an analog signal may define a frequency
spectrum and, for a digital signal, may define a transport stream including PID
information as well as a frequency at which the transport stream is provided".

Eyer further states at col. 3, line 45:

"PID data is provided to distinguish the programming services from one
another in a packetized multiplexed digital transport stream".

As stated above, Eyer is silent about different digital transport protocols and
repeatedly states that it is "broadcast address information (e. g. frequency and/or
PID)" (col. 8, line 36; col. 7, line 66; see also col. 10, lines 29 – 51), not a "transport
protocol", that is different for each channel.

Thus, Eyer does not provide either of the claim elements missing from Cuccia.

C. The Combination of Cuccia and Eyer

In the Rejection, (end of paragraph 3), the Examiner asserts there is a teaching, suggestion or motivation to combine or modify Cuccia in view of Eyer by stating:

"Eyer provides motivation for receiving several transport protocols (satellite, terrestrial and cable) so that the user can receive the different television formats offered by broadcasters (col. 2, lines 23 – 45) and Yu provides motivation for switching the operation of an electronic device as appropriate (col. 4, lines 10 – 17)".

The reference to Yu will be considered below in connection with claims 4 – 9.

As noted above, Eyer does not discuss "satellite, terrestrial and cable" in terms of "transport protocols" but rather as different "distribution paths". Furthermore, the Examiner's statement regarding "motivation" is submitted to be unrelated to making out a prima facie case of obviousness with regard to the rejected claims based on Cuccia in view of Eyer. The Examiner's interpretation of a showing of motivation or suggestion misses the mark since there is no mention in either Cuccia or Eyer of receiving several different "transport protocols" and therefore there is no motivation for modifying Cuccia in view of Eyer to accomplish such a result. Neither reference provides an enabling disclosure of how or why anyone would process different transport protocols.

Specifically, Eyer does not disclose details of his digital processing function 265 which would enable anyone of ordinary skill to make any use of that element of the system of Eyer in Cuccia's system to arrive at the combinations set forth in the rejected claims.

It has been shown that Eyer does not disclose receiving several different transport protocols and that feature is found only in Applicant's disclosure, not in either of the cited references.

In this Office Action, the Examiner asserts that "a new ground of rejection is made in view of Cuccia in view of Eyer and applicant's admitted prior art" (Rejection, top of page 2 and top of page 4). In paragraph 8, the Examiner goes on to say:

> "Applicant's admitted prior (art) (*sic*) discloses that packets having different transport paths have different transport protocols (pages 1 – 2: note ATSC has a different format than DBS). Therefore it would be obvious to one skilled in the art at the time the invention was made to have different transport protocols in the invention of Cuccia in view of Eyer in order to provide data as related to the communication medium or preference, as is known in the art (specification, page 1, note: prior art proprietary transport formats)".

However, as pointed out above, neither reference contemplates streams having different transport protocols. Neither reference discusses or provides any solution (enabling disclosure) for how to handle different transport protocols in an adaptive decoder. Neither reference provides any motivation to combine what they disclose with the "admitted prior art". It is only Applicant's claimed combinations which address the problems of the admitted prior art and provide operative systems to solve the decoding problems associated with different transport protocols. The cited references fail to do so.

The rejected dependent claim 3 and independent claim 10 are distinguished over the cited art in the same manner as set forth with respect to independent claim 1 above and, in addition, include the following elements:

Claim 3:
"wherein the protocol decoder comprises a processor, responsive to a first control program for processing the packets from the first packet stream source to extract the respective payloads, a second control program for processing the packets from the second packet stream source to extract the respective payloads, and a third control program for switching between the first control program and the second control program".

Claim 10:

"said protocol decoder further comprises a processor responsive to first, second and third control programs, the third control program is responsive to the select signal to switch to the first control program when the first packet stream source is coupled to the protocol decoder and to switch to the second control program when the second packet stream source is coupled to the protocol decoder".

The Examiner did not find <u>any</u> "first, second and third control programs, etc" as claimed above in either Cuccia or Eyer but simply concluded (Rejection, paragraph 7):

"Further regarding claim 3, the protocol decoder is a processor (col. 7, lines 63 – 65) responsive to control programs for extracting payloads from respective transport streams. The protocol decoder inherently has a third control program for switching between the first control program and the second control program (col. 9, lines 33-42)".

There is nothing in the cited text of Eyer to support the Examiner's reference to first, second and third control programs and that text merely refers to the standard processing of a single transport stream containing packetized data for a plurality of channels along with Packet ID (PID) or "channel" information. The PID allows the system to separate the data for a selected channel from the data for other channels that is contained in the single transport stream. This has nothing to do with control programs for extracting payloads from transport streams having different transport protocols and does not anticipate or render obvious the elements of claims 3 and 10 quoted above.

Thus, the Examiner has failed to indicate anything in either of the references which would lead one to combine them in any manner, and certainly not to arrive at the inventions of independent claims 1, 10 and dependent claim 3. Applicant also asserts that the rationale provided above for claim 1 also applies for independent claims 11 and 12. It is submitted therefore that no prima facie case of obviousness of the rejected independent claims 1 and 10 – 12 or dependent claim 3 has been made out by the Examiner and withdrawal of this rejection is requested.

II. 35 U.S.C. § 103(a) Rejection of Claims 4-9

The Examiner rejected claims 4-9 under 35 U.S.C. 103(a) as being unpatentable over Cuccia in view of Eyer and Applicant's admitted prior art, as applied to claim 3, and further in view of Yu (U.S. Patent # 5,410,709). Applicant requests reconsideration and withdrawal of this rejection.

The Examiner acknowledges that the principal reference "Cuccia does not disclose that the packets have a first and second transport protocol" as indicated above and as required by all of the rejected claims, including claims 4 – 9 which depend from claim 1.

As pointed out above, Eyer also does not disclose processing of packets having a first and a second transport protocol and, furthermore, it has been demonstrated that there is no basis for combining Cuccia and Eyer. In addition, it has been shown that the added limitations of dependent claim 3, from which claims 4 – 9 are dependent, is neither shown nor suggested by either Cuccia or Eyer. For these reasons alone, the rejection of claims 4 – 9 should be withdrawn.

D) The Combination of Cuccia, Eyer and Yu

As indicated above, claims 4 – 9 have been rejected as obvious compared to a combination of Cuccia and Eyer and Yu and Applicant's admitted prior art.

The Examiner states (Rejection, paragraph 9):
"Regarding claims 4 – 9, Cuccia in view of Eyer does not disclose that the first and second control programs comprise a packet handler, several interrupt drivers and an interrupt vector containing a pointer to an interrupt driver, and reallocating a buffer".

Despite all these admitted additional missing elements in the two principal references and the additional fact that Yu has nothing whatsoever to do with protocol decoders, the Examiner states in the Rejection (see above) that Yu is an appropriate

reference under § 103 because "Yu provides motivation for switching the operation of an electronic device as appropriate (col. 4, lines 10 – 17)". This broad statement of an alleged problem does not support a finding of the necessary "motivation" for combining references.

Yu (col. 1, line 17) describes interrupt processing within a "hybrid" general purpose digital computing system where a number of central processing units operate under the control of different operating systems. The CPU's are capable of accessing all of the resources within the entire system. The Examiner relies on col. 4, line 67 through col. 5, line 15 to indicate what Yu discloses. That text reads as follows:

> "The dispatching function module 40-4 contains routines for dispatching interrupts received from controller channel control programs loaded into an XCP interrupt hardware register 14-1 included within XCP central processing unit 14. More specifically, the interrupt received by the XCP central processing unit 14 causes the referencing of one of 16 interrupt vectors from memory. The interrupt vector containing the channel number information is loaded into the register 14-1. The module 40-4 responds to the interrupt, obtains the matching channel number and invokes the corresponding driver interrupt handler routine. Both modules 40-2 and 40-4 operatively couple to the interrupt control table 42. The function processing module 40-2 accesses the table 42 to store and clear entries while module 40-4 accesses the table 42 in dispatching interrupts to the appropriate driver handler routines."

The Examiner takes the position that the foregoing text demonstrates that in Yu, "the control programs are chosen using a third control program" as indicated by the last six lines of the quotation above. The Examiner also concludes that "a buffer is reallocated" in Yu. Neither conclusion is believed to be supported by Yu. In addition, it is submitted that Yu relates to systems that are so different from those of the rejected claims that Yu could only be found by using hindsight and by using Applicant's claims as a roadmap, both of which are impermissible approaches to reaching a conclusion of non-obviousness (see above).

The Examiner's citation of *In re Oetiker*, 977 F. 2d 1443 (Fed. Cir. 1992) is

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applicable here in that the decision requires "a prior art reference must -------- then be reasonably pertinent to the particular problem with which the applicant was concerned", i. e. adaptively decoding multiple streams of packets having different transport protocols. Yu clearly is not such a reference and should not be relied upon for such a rejection under § 103.

Finally, taking into account the substantial differences between claim 3 and the Cuccia and Eyer references as pointed out above (and acknowledged at least in part by the Examiner), claims 4 – 9 are submitted to be non-obvious as compared to the prior art.

It is submitted that there is nothing in either Cuccia or Eyer which would lead anyone to combine any teachings of those two references with Yu. It is submitted that the "admitted prior art" only sets forth information which is a portion of the problem to be solved by Applicant's claimed invention. When such information is considered along with the cited references, the problem remains unsolved since there is no enabling disclosure of an appropriate "adaptive decoder" in the references. The Examiner's suggested incomplete combinations have only been arrived at as a result of Applicant's teachings and inappropriate use of hindsight.

E) No Prima Facie Case of Obviousness Exists Based on the Combination of the Cited Patents With or Without the Admitted Prior Art

The primary reference, Cuccia, has been acknowledged by the Examiner as lacking elements of independent claims 1, and 10 - 12.

The Examiner has attempted to rely on the secondary patent of Eyer to supply missing claim elements. However, the Examiner is not free to create such a combination in the absence of either motivation in the applied references to do so or a reasonable expectation of success. In view of the substantial lack of relevant teachings and disclosure in the Eyer patent as pointed out above, one skilled in the art would not be aware that there is any reason or basis to consider Cuccia and Eyer together. Without such an awareness, the skilled artisan would not be motivated to modify the teachings of either of these patents.

It should be apparent that Eyer is substantially different from the invention set forth in rejected claims of this application and Eyer does not fill a gap which the Examiner has acknowledged.

According to the teachings and disclosure set forth in Eyer, the ordinary skilled artisan would not be motivated to modify the teachings of the Cuccia patent. Consequently, the Eyer patent cannot provide a basis for a position that its disclosure provides the skilled artisan a motivation to add something to Cuccia which is not disclosed or suggested by Eyer that would produce a useful, successful apparatus or method. Neither of the disclosures of the Cuccia or Eyer patents acknowledges that there is any problem present in their systems which could be solved by any such combination.

With respect to the Examiner's attempt to combine Cuccia and Eyer with Yu, It is submitted that one skilled in the art would not be motivated to combine their teachings for any useful purpose. It is respectfully submitted that the suggested combination can be motivated, if at all, solely by hindsight reasoning guided by Applicant's own disclosure — reasoning that is expressly forbidden during the examination of a claim under § 103(a). In re Gorman, 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991); In re Fritch, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992).

With respect to the Examiner's attempt to add to the above-noted combinations of references information identified as "admitted prior art", such information only sets forth a portion of the problem to be solved by Applicant's claimed combinations of elements. Combining of such information with the cited references does not provide any solutions or enabling disclosures which would lead a person of ordinary skill to the claimed combinations of elements. Accordingly, the rejection of each of claims 1 and 3 – 12 should be withdrawn.

F) Dependent claims

The rejected, dependent claims 4 – 9 are also submitted to be patentable because each recites limitations to the invention recited in the claims 1 and 3 on
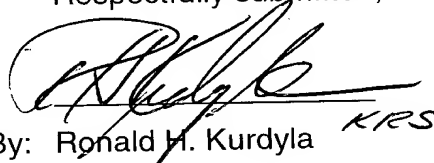
which claims 4 – 9 are dependent. In re Fine, 5 U.S.P.Q.2d at 1600. Since no prima facie case of obviousness exists with respect to the independent claims, no prima facie case of obviousness exists with respect to any of the dependent claims. Applicant therefore requests withdrawal of the rejection of these claims for the reasons listed above.

It is noted that each of independent claims 1, 10 and 12 has been amended to clarify the manner in which the "select" signal is described.

G) Conclusion

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application is in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the Applicants' attorney at (609) 734-6818, so that a mutually convenient date and time for a telephonic interview may be scheduled.

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